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Atty Docket No. 18528/230 235/013US

### **AMENDMENTS TO THE CLAIMS**

Please enter the following amendments without prejudice or disclaimer.

Please cancel claims 41-67 without prejudice or disclaimer.

This listing of claims will replace all prior versions, and listings, of claims in the application.

#### **In the claims:**

1-22. Canceled.

23. (Previously presented) A method of treating obesity in a human subject comprising administering to said subject an amount of a composition comprising an amylin or amylin agonist effective to treat obesity, with the proviso that the composition does not contain a cholecystokinin or a cholecystokinin agonist and wherein the amount of the amylin or amylin agonist administered is about 0.01 mg to about 5 mg per day.

24. (Previously presented) A method according to claim 23 wherein said amylin agonist is an amylin agonist analogue.

25. (Previously presented) A method according to claim 24 wherein said amylin agonist analogue is selected from the group consisting of <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:12), <sup>18</sup>Arg<sup>25,28,29</sup>Pro-human-amylin (SEQ ID NO:10), and <sup>18</sup>Arg<sup>25,28</sup>Pro-h-amylin (SEQ ID NO:8).

26. (Previously presented) A method according to claim 24 wherein said amylin agonist analogue is <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:12).

27. (Previously presented) A method according to claim 23 wherein said amylin or amylin agonist is administered subcutaneously.

28. (Previously presented) A method according to claim 26 wherein said amylin agonist analogue is administered subcutaneously.

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29. (Previously presented) A method according to claim 23 wherein said amylin or amylin agonist is administered from 1 to 4 times per day.

30. (Previously presented) A method according to claim 29 wherein said amylin or amylin agonist is administered in an amount from about 0.0025 mg/dose to about 5 mg/dose.

31. (Previously presented) A method according to claim 23 wherein said amylin or amylin agonist is administered before a meal.

32. (Previously presented) A method according to claim 23 wherein said amylin or amylin agonist is administered about 15 minutes of said meal.

33. (Previously presented) A method of treating obesity in a human subject comprising administering to said subject a composition comprising an active anti-obesity agent consisting essentially of an amylin or an amylin agonist, wherein the amount of amylin or amylin agonist administered is about 0.01 mg to about 5 mg per day.

34. (Previously presented) A method according to claim 33 wherein said amylin agonist is an amylin agonist analogue.

35. (Previously presented) A method according to claim 34 wherein said amylin agonist analogue is selected from the group consisting of <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:12), <sup>18</sup>Arg<sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:10) and <sup>18</sup>Arg<sup>25,28</sup>Pro-h-amylin (SEQ ID NO:8).

36. (Previously presented) A method according to claim 34 wherein said amylin agonist analogue is <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:12).

37. (Previously presented) A method according to claim 33 wherein said amylin or amylin agonist is administered subcutaneously.

38. (Previously presented) A method according to claim 33 wherein said amylin or amylin agonist is administered from 1 to 4 times per day.

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39. (Previously presented) A method according to claim 33 wherein said amylin or amylin agonist is administered before a meal.

40-67. Canceled.

68. (New) The method according to claim 24, wherein the amylin agonist analogue comprises an amino acid sequence of (SEQ ID NO:14):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>10</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-Pro-J<sub>1</sub>-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu

J<sub>1</sub> is Ser, Pro or Thr;

K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is an amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Pro, and K<sub>1</sub> is Asn; then one or more A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

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69. (New) The method according to claim 24, wherein the amylin agonist analogue comprises an amino acid sequence of (SEQ ID NO:15):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-  
G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-J<sub>1</sub>-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu;

J<sub>1</sub> is Ser, Pro, Leu, Ile or Thr;

K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when

(a) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Pro and K<sub>1</sub> is Asn; or

(b) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is His, E<sub>1</sub> is Ser, F<sub>1</sub> is Asn, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Ser and K<sub>1</sub> is Asn;

then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

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70. (New) The method according to claim 24, wherein the amylin agonist analogue comprises an amino acid sequence of (SEQ ID NO:16):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-  
G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>I<sub>1</sub>-J<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ala or Pro;

J<sub>1</sub> is Ile, Val, Ala or Leu;

K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn H<sub>1</sub> is Leu, I<sub>1</sub> is Pro, J<sub>1</sub> is Val and K<sub>1</sub> is Asn; then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

71. (New) The method according to claim 24, wherein the amylin agonist analogue comprises an amino acid sequence of (SEQ ID NO:17):

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<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-  
Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-J<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu;

J<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and

provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val and J<sub>1</sub> is Asn; then one or more of A<sub>1</sub> to J<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

72. (New) The method according to claim 34, wherein the amylin agonist analogue comprises an amino acid sequence of (SEQ ID NO:14):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-  
Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-Pro-J<sub>1</sub>-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

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B<sub>1</sub> is Ala, Ser or Thr;  
C<sub>1</sub> is Val, Leu or Ile;  
D<sub>1</sub> is His or Arg;  
E<sub>1</sub> is Ser or Thr;  
F<sub>1</sub> is Ser, Thr, Gln or Asn;  
G<sub>1</sub> is Asn, Gln or His;  
H<sub>1</sub> is Phe, Leu or Tyr;  
I<sub>1</sub> is Ile, Val, Ala or Leu  
J<sub>1</sub> is Ser, Pro or Thr;  
K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is an amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Pro, and K<sub>1</sub> is Asn; then one or more A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

73. (New) The method according to claim 34, wherein the amylin agonist analogue comprises an amino acid sequence of (SEQ ID NO:15):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>-F<sub>1</sub>-  
G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-J<sub>1</sub>-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;  
B<sub>1</sub> is Ala, Ser or Thr;  
C<sub>1</sub> is Val, Leu or Ile;  
D<sub>1</sub> is His or Arg;  
E<sub>1</sub> is Ser or Thr;

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F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu;

J<sub>1</sub> is Ser, Pro, Leu, Ile or Thr;

K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when

(a) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Pro and K<sub>1</sub> is Asn; or

(b) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is His, E<sub>1</sub> is Ser, F<sub>1</sub> is Asn, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Ser and K<sub>1</sub> is Asn;

then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

74. (New) The method according to claim 34, wherein the amylin agonist analogue comprises an amino acid sequence of (SEQ ID NO:16):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-  
G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>I<sub>1</sub>-J<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;



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E<sub>1</sub> is Ser or Thr;  
F<sub>1</sub> is Ser, Thr, Gln or Asn;  
G<sub>1</sub> is Asn, Gln or His;  
H<sub>1</sub> is Phe, Leu or Tyr;  
I<sub>1</sub> is Ala or Pro;  
J<sub>1</sub> is Ile, Val, Ala or Leu;  
K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn H<sub>1</sub> is Leu, I<sub>1</sub> is Pro, J<sub>1</sub> is Val and K<sub>1</sub> is Asn; then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

75. (New) The method according to claim 34, wherein the amylin agonist analogue comprises an amino acid sequence of (SEQ ID NO:17):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-J<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;  
B<sub>1</sub> is Ala, Ser or Thr;  
C<sub>1</sub> is Val, Leu or Ile;  
D<sub>1</sub> is His or Arg;  
E<sub>1</sub> is Ser or Thr;  
F<sub>1</sub> is Ser, Thr, Gln or Asn;  
G<sub>1</sub> is Asn, Gln or His;  
H<sub>1</sub> is Phe, Leu or Tyr;

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I<sub>1</sub> is Ile, Val, Ala or Leu;

J<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and

provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val and J<sub>1</sub> is Asn; then one or more of A<sub>1</sub> to J<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

76. (New) A method of treating obesity in a human subject comprising administering to said subject an amount of a composition comprising a peptide having an amino acid sequence of (SEQ ID NO:14):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>10</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-Pro-J<sub>1</sub>-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu

J<sub>1</sub> is Ser, Pro or Thr;

K<sub>1</sub> is Asn, Asp or Gln;

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X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is an amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Pro, and K<sub>1</sub> is Asn; then one or more A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy and with the proviso that the composition does not contain a cholecystokinin or a cholecystokinin agonist.

77. (New) A method of treating obesity in a human subject comprising administering to said subject an amount of a composition comprising a peptide having an amino acid sequence of (SEQ ID NO:15):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-  
G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-J<sub>1</sub>-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu;

J<sub>1</sub> is Ser, Pro, Leu, Ile or Thr;

K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage

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comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when

(a) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Pro and K<sub>1</sub> is Asn; or

(b) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is His, E<sub>1</sub> is Ser, F<sub>1</sub> is Asn, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Ser and K<sub>1</sub> is Asn;

then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy and with the proviso that the composition does not contain a cholecystokinin or a cholecystokinin agonist.

78. (New) A method of treating obesity in a human subject comprising administering to said subject an amount of a composition comprising a peptide having an amino acid sequence of (SEQ ID NO:16):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-  
G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>I<sub>1</sub>-J<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ala or Pro;

J<sub>1</sub> is Ile, Val, Ala or Leu;

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K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn H<sub>1</sub> is Leu, I<sub>1</sub> is Pro, J<sub>1</sub> is Val and K<sub>1</sub> is Asn; then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy and with the proviso that the composition does not contain a cholecystokinin or a cholecystokinin agonist.

79. (New) A method of treating obesity in a human subject comprising administering to said subject an amount of a composition comprising a peptide having an amino acid sequence of (SEQ ID NO:17):

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-J<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu;

J<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage wherein said intramolecular linkage

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comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and

provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val and J<sub>1</sub> is Asn; then one or more of A<sub>1</sub> to J<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy and with the proviso that the composition does not contain a cholecystokinin or a cholecystokinin agonist.

80. (New) The method according to claim 23 wherein the amount administered is from about 30 µg/dose to about 300 µg/dose.

81. (New) The method according to claim 38 wherein said amylin or amylin agonist is administered in an amount from about 0.0025 mg/dose to about 5 mg/dose.

82. (New) The method according to claim 33 wherein said amylin or amylin agonist is administered at a dose from about 30 µg/dose to about 300 µg/dose.

83. (New) The method according to claim 76 wherein said peptide is administered from about 1 to 4 times a day at an amount of about 0.0025 mg/dose to about 5 mg/dose.

84. (New) The method according to claim 76 wherein said peptide is administered at a dose from about 30 µg/dose to about 300 µg/dose.

85. (New) The method according to claim 77 wherein said peptide is administered from about 1 to 4 times a day at an amount of about 0.0025 mg/dose to about 5 mg/dose.

86. (New) The method according to claim 77 wherein said peptide is administered at a dose from about 30 µg/dose to about 300 µg/dose.

87. (New) The method according to claim 78 wherein said peptide is administered from about 1 to 4 times a day at an amount of about 0.0025 mg/dose to about 5 mg/dose.

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88. (New) The method according to claim 78 wherein said peptide is administered at a dose from about 30 µg/dose to about 300 µg/dose.

89. (New) The method according to claim 79 wherein said peptide is administered from about 1 to 4 times a day at an amount of about 0.0025 mg/dose to about 5 mg/dose.

90. (New) The method according to claim 79 wherein said peptide is administered at a dose from about 30 µg/dose to about 300 µg/dose.

91. (New) The method according to claim 76 wherein said peptide is <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:12).

92. (New) The method according to claim 77 wherein said peptide is <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:12).

93. (New) The method according to claim 78 wherein said peptide is <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:12).

94. (New) The method according to claim 79 wherein said peptide is <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:12).